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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,112	09/09/2003	Paul E. Miller	71368-0063	2111

20915 7590 09/03/2004

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EXAMINER

WONG, DON KITSUN

ART UNIT	PAPER NUMBER
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2821

DATE MAILED: 09/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/605,112	<b>Applicant(s)</b> MILLER ET AL.	
	<b>Examiner</b> Minh D A	<b>Art Unit</b> 2821	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 September 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

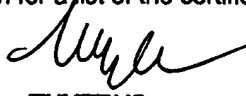
**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.



**TUYET VO  
PRIMARY EXAMINER**

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/16/03</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the phrase "wherein the cowling houses at least two antennas resonant in different frequencies" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. Because it does not show this limitations in figures or specification, since only one antenna should have one antenna resonant. See MPEP § 2173.05(d).

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000.

Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1-7, 9-12 are rejected with the best understood under 35 U.S.C. 102(e) as being unpatentable by Tiejen (US 2004/0004575 A1).

Regarding claim 1, Tiejen discloses an antenna array comprising at least one contoured antenna assembly (110 or 110') having a cowling and a base plate (platform (150), wherein the cowling houses (150) at least two antennas resonant in different frequencies. See figures 2 and 38, col.3, lines [0062] - lines [0065] to col.4, lines [0073].

Regarding claim 2, Tiejen discloses an array antenna comprising at least two contoured antenna assemblies, each of which is identical in appearance to the other. See figures 1a and 38.

Regarding claim 3, Tiejen discloses wherein the cowling (platform) is elongated and has a longitudinal axis at an acute angle relative to the base-plate. See figures 1a and 38.

Regarding claim 4, Tiejen discloses wherein a portion of one antenna extends (see joints) from the cowling. See figures 1a and 38.

Regarding claim 5, Tiejen discloses wherein at least one antenna is a multi-band antenna. See figure 38.

Regarding claim 6, Tiejen discloses an array antenna having a mounting platform (150) for antennas (110 and 110'), the improvement comprising an array of at least two antenna assemblies, each antenna assembly having a cowling at least partially enclosing an antenna wherein the cowlings and visible portions of the antenna assem-

blies look identical. See figures 2 and 38, col.3, lines [0062] - lines [0065] to col.4, lines [0073].

Regarding claim 7, Tiejen discloses at least one of the cowlings at least partially encloses more than one antenna. See figure 38.

Regarding claim 9, Tiejen discloses wherein the cowlings are raked relative to the mounting platform. See figures 1a and 38.

Regarding claim 10, Tiejen discloses the cowlings are elongated and each has a longitudinal axis at an acute angle relative to the baseplate. See figures 1a and 38.

Regarding claim 11, Tiejen discloses a portion of each antenna extends from the respective cowling. See figures 1a and 38.

Regarding claim 12, Tiejen discloses at least one antenna is a multiband antenna. See figure 12.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over by Tiejen (US 2004/0004575 A1).

Regarding claim 8, Tiejen discloses the claimed invention except for arch. It would have been an obvious to one having ordinary skill in the art at the time the

invention was made to employ arch, since the examiner takes Office Notice of the equivalence of platform (150) and arch for their use in the an array antenna art and the selection of any of these known equivalents to platform (150) would be within the level of ordinary skill in the art.

**Conclusion**

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Seward et al (US 6,107,972) and Seward et al. (US 5,734,352) are cited to show a multi-band antenna.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Minh A whose telephone number is (571) 272-1817. The examiner can normally be reached on M-F (5:30 –2:30 PM).

If attempts to reach the examiner by telephone is unsuccessful, the examiner's supervisor, Don Wong, can be reached on (571) 272-1834. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and (703) 872-9319 for final communications.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center receptionist whose telephone number is (571) 272-1553.

Examiner

Minh A

Art unit 2821

8/4/04



**TUYET VO  
PRIMARY EXAMINER**